MEDICAL PATHOLOGY, SPECIAL THERAPEUTICS, AND PRACTICE OF MEDICINE.

12. *Nature and Treatment of Pulmonary Consumption as Exemplified in Private Practice.*—This is the title of a paper continued through several recent Nos. of the *Lancet*, by Dr. C. J. B. Williams, who is high authority on this subject, and his son. In his concluding article (Aug. 15, 1868), Dr. W. says that, on taking a retrospect of an experience of forty years in the treatment of consumption, he can trace a remarkable improvement in its success as judged by its results. He ascribes this improvement to the use of cod-liver oil, and expresses his conviction that this agent has done more for the consumptive than all other means put together. "And so far," he says, "is this remedy from having 'had its day and gone out of fashion,' that in my experience its usefulness and efficacy have gone on increasing in proportion to the greater facilities for obtaining it in a pure state, and to the improvements in the manner of administering it, in combination with various tonics, and in connection with certain rules of diet and regimen."

Dr. W. states that the average duration of life in phthisis during his forty years' experience has at least quadrupled, or raised from two to eight years, and that "this is below the actual results as calculated by my son; for of the 500 cases, 380 were still living at the last report, and many of these are likely to live for many years to come."

The treatment which Dr. W. has commonly adopted, is as follows:—

"As we have been led to conclude that consumption is essentially a disease of degeneration and decay, so it may be inferred that the treatment for the most part should be of a sustaining and invigorating character. Not only the most nutritious food, aided by a judicious use of stimulants and of medicinal tonics, but pure air, with such varied and moderate exercise in it as the strength will bear, and the enlivening influence of bright sunshine and agreeable scenery and cheerful society, are among the means best suited to restore the defective functions and structures of frames prone to decay." * * *

It is generally considered that consumption should be treated on a tonic and sustaining plan; and that the nourishment and strength of the system should be supported by varied tonics and cod-liver oil, as well as by the most nutritive articles of diet. But, Dr. W. says, "when the disease is ushered in with symptoms of acute bronchitis or pneumonia, with its attendant fever and scanty disordered secretions, it is obvious that such treatment is wholly unsuited for the occasion; and that remedies of the mild antiphlogistic kind, such as salines, with or without antimony, blisters, and cataplasms, and sometimes even moderate leeching or cupping, will give most relief, and will prepare the patient for the safe administration of the sustaining class of remedies." * * In case of active inflammation, continued heat of skin, hard racking cough (dry, or with viscid and tinged expectoration), much pain or soreness of the chest or side, it answers well to withhold or withdraw the stronger stimulants and tonics, and for a time —it may be a few days only—to substitute cooling and soothing remedies, with moist epithems or counter-irritants on the chest, and, more rarely, local depletion. But this discipline, which is exceptional, should as soon as possible be replaced by what may be called the regular treatment by cod-liver oil and tonics, and a more generous diet. The transition need not be abrupt. So far as regards cod-liver oil, and the mild acid tonics, with which I generally combine it, the change may be made long before the inflammatory complication has subsided. A dose of these may be given after the morning and perhaps after the mid-day meal, whilst still the saline is taken in the evening and night, and whilst blisters or other counter-irritants are in full operation.

"So soon as the nocturnal heat of skin subsides and the cough becomes less urgent, and the urine more free, the salines may be replaced by a mere cough linctus, if that be needed; the counter-irritation moderated, and the tonic, given with the oil, gradually strengthened by the addition of small doses of salicine, quinia, or iron. These two last tonics are of great use where they are well borne, as their influence in strengthening the muscular system and in improving the condition of the blood is greater than that of any other drug; but their use requires much discretion and watchfulness, for they often increase the lingering or intercurrent inflammations, with their attendant pain, constriction, cough, and viscid expectoration, and not unfrequently they derange the functions of the stomach and bowels. It, therefore, often happens, where the patient cannot be seen frequently, that it is safer to be content with a milder tonic—such as calumba, cascarilla, or chiretta—which may be continued for weeks and months together in conjunction with the oil, than to give those that are more powerful, but which by occasional disturbances may prevent the continuance of the remedy.

"But the great remedy, more essential and more effectual than any other, is the cod-liver oil; and we may well bestow a little consideration on the mode of using it to the best advantage. It is now pretty generally admitted by the profession that the pure, pale oil, simply extracted from the fresh, healthy livers of the fish, is that most suitable for the majority of patients, as being less unpalatable and at least as efficacious as the impure kind." * * *

"Cod-liver oil, when taken into the system in sufficient quantities, and for a sufficient length of time, acts as a nutrient, not only adding to the fat of the body, but also promoting the healthy growth of other tissues, and in some way, as an alterative, counteracting the morbid tendency to the proliferation of the decaying cells of pus, tubercle, and kindred cacoplastic and aplastic matters.

"That its efficacy depends much on its being absorbed freely into the blood, and through the circulation pervading all parts of the body, and thus reaching to the very seat of morbid deposits and formations. That the more fluid part of cod-liver oil surpasses all other oils and fats in the facility with which it forms emulsions, which are tolerated by the stomach and readily absorbed into the blood, without causing the nausea and bilious derangement that commonly result from an excess of fat food. This peculiarity may depend on the biliary and other matters contained in the oil, which in other instances of disease is found to act beneficially on the liver and other secreting organs.

"That the best time for the administration of the oil is immediately after, or, to those who prefer it, at or before, a solid meal, with the constituents of which the oil becomes so intimately blended that it forms a part of the chymous mass, and is less likely to rise by eructation than when the oil is taken into an empty stomach. From this chymous mass, the oil being absorbed through the lacteals with the chyle, is less apt to disorder the liver than if absorbed through the veins of an empty stomach.

"That as the use of the oil should be continued for a long time—perhaps for months, or even years—it is of great importance to conciliate both the palate and the stomach by giving it in a vehicle which may agreeably disguise its flavour and strengthen the stomach to bear it. For this purpose an aromatic bitter, such as the compound infusion of orange-peel, acidulated with a mineral acid, both to help to cover the taste of the oil and also to suit the stomach, which should be duly supplied with acid during digestion, generally answers well. Syrup may be added according to the taste of the patient; or, still better, some bitter tincture, such as calumba, cascarilla, or quinia, in every case in which it is desirable to improve appetite and tone. In cases of peculiar weakness of stomach, with tendency to retching or nausea, strychnia, in a dose of from $\frac{1}{32}$ to $\frac{1}{24}$ of a grain, proves a most valuable adjunct to the vehicle. By its means I frequently overcome the fastidiousness of stomach arising from debility, hysteria, or indulgence in alcoholic liquors. Salicine is another efficacious alternative of the same kind. Either of these, although a powerful tonic, has none of the heating properties of quinia or iron. When the strong bitter taste is objected to, a pill, containing extract of hop or chamomile, or salicine, or quinia, may be taken after, or before, the oil and its vehicle.

"The bulk of the whole dose of oil and vehicle should be small, so that it may be swallowed at a single draught; therefore the vehicle should not exceed a tablespoonful, with, at first, a teaspoonful of oil, to be gradually increased to a tablespoonful. The dose of oil should rarely exceed a tablespoonful twice or thrice daily: when a larger amount is taken at a time, generally either it deranges the stomach or liver, or some of it passes unabsorbed by the bowels.

"The acid may be varied according to circumstances. The nitric generally suits best in inflammatory cases, and those attended with much lithic deposit in the urine; but its tendency to injure the teeth is an objection to its long continuance. The sulphuric is more eligible where there is liability to hæmoptysis, profuse sweats, or diarrhœa. But in most cases, and for long continuance, I have found reason to prefer the diluted phosphoric acid, which may be termed the most physiological of the acids, tending to derange the chemistry of the body less than the others.

"With some individuals the oil agrees so well, and so much improves their digestive powers, that they require few or no restrictions in diet; but this is not the case with the majority. The richness of the oil does prove more or less a trial, sooner or later, to most persons; and to diminish this trial as much as possible, it obviously becomes proper to omit or reduce all other rich and greasy articles of food. All pastry, fat meat, rich stuffing, and the like, should be avoided; and great moderation observed in the use of butter, cream, and very sweet things. Even new milk in any quantity is not generally borne well during a course of oil; and many find malt liquor too heavy, increasing the tendency to bilious attacks. A plain nutritious diet of bread, fresh meat, poultry, game, with a fair proportion of vegetables, and a little fruit, and only a moderate quantity of liquid at the earlier meals, commonly agrees best, and facilitates the continued exhibition of the oil in doses sufficient to produce its salutary influence on the system.

"In case of a bilious attack coming on, indicated by nausea, headache, furred tongue, offensive eructations, high-coloured urine, and sometimes pain and tenderness of the right hypochondrium, it is necessary to suspend the oil, lighten the diet of the patient, and give blue pill or calomel with an aperient on alternate nights, and an effervescing saline two or three times during the day. A few days of this treatment will generally set the stomach and liver to rights, and the oil may be resumed, beginning with small doses as at first. In all cases during the use of the oil the bowels should be kept regular in action; and if this cannot be done by regularity of habit and diet, it should be effected by the use of a mild daily pill of rhubarb or aloes." * * * *

"Although my long experience assigns to cod-liver oil a place far above all other remedies in the treatment of pulmonary consumption and its allied maladies, it has taught me to believe also in the limited efficacy of certain other agents, and it would not be fair to pass these over in this brief summary of treatment.

A combination of iodide of potassium and nitric acid with a vegetable tonic, Dr. W. says, has distinctly wrought some good in consumptive cases before the pure oil was introduced. He still sometimes uses this medicine in the rare cases in which cod-liver oil disagrees or cannot be taken, and thinks that it is improved by the addition of a drachm or two of pure glycerine to each dose. Glycerine by itself is of little use, but it is valuable as a lubricant, and to sheathe the acrimony of mineral acids and other pungent medicines.

"The hypophosphites of soda and lime, so strongly recommended by Dr. Churchill, of Paris, have in my hands proved decidedly beneficial in certain cases. They have been tried by Drs. Quain and Cotton, at the Brompton Hospital, with only negative results; but having met with several patients who distinctly ascribed their improvement to Dr. Churchill's treatment, I have thought it right to try them myself, both as a substitute for the oil and in addition to it. In the former way the results have not been generally satisfactory: the hypophosphite does not disagree, but there is no marked improvement as under the oil; and when they have been doing well under the oil, the patients generally lose flesh and strength when the hypophosphite is substituted for it. On the other hand, it has happened to me in several cases that a patient has long been taking the oil, and, after having derived great benefit from it, halts in his improvement, or even loses ground, and then the addition of the hypophosphite has been followed by a marked change for the better; flesh and strength have been gained, and the chest symptoms have been more or less improved. In these cases I have merely added four or five grains of the hypophosphite to the vehicle in which the oil is given, always selecting the phosphoric as the acid, and generally substituting glycerine for the usual syrup. Such precautions are necessary, because the hypophosphites are very unstable in composition; the addition of nitric acid, or mere exposure of the solution to the air (if not guarded with glycerine or a good deal of syrup), being sufficient to convert them into inert phosphates. In my mixture of the hypophosphite with phosphoric acid, I presume the hypophosphorous acid is set free, and is the active agent in the compound. How it acts is quite uncertain. * * *

"Perhaps the efficacy of the sulphurous acid—Dr. Dewar's remedy for consumption—may depend on an influence not altogether unlike that of the hypophosphites. My experience of the use of the spray of sulphurous acid is limited in phthisis, and as far as it has gone has not been very encouraging. But I have found the spray a most useful and agreeable remedy in various affections of the throat, whether diphtheritic or aphthous; and it has proved cleansing and soothing in some cases of foul ulceration of the throat, affecting both larynx and fauces, generally syphilitic in origin, and sometimes ending in pulmonary consumption.

"In connection with this subject, I most notice remedies administered by inhalation, which are really useful in certain cases, chiefly those in which the larynx and trachea are much affected, and in those attended with convulsive cough or offensive expectoration. I have generally found the use of inhaling instruments fatiguing and unnecessary. A quart jug of hot water, with a napkin from over the nose down to and around the jug to confine the steam, is all that is needed. To the hot water is added the drug to be inhaled; and creasote or carbolic acid, iodine, chloroform, oil of turpentine, and juice or extract of hemlock, are the articles which I have found most beneficial. A few drops of one, or of several of these combined, being put into the hot water, the inhalation is practised through both mouth and nostrils without restraint or difficulty, and may be continued for five or ten minutes every night, and, if need be, repeated once or twice in the day. Although the chief operation of this medicated vapour is on the guttural and bronchial surface, yet a portion penetrates into the lungs, and is absorbed into the system; for iodine and oil of turpentine can be detected in the urine within a few minutes of the inhalation being made. Still, although proving very serviceable in certain cases, I cannot rank inhalation higher than as a subordinate remedy in the treatment of consumption. I may add, that the practice of painting the chest with tincture of iodine every night, as a gentle counter-irritant, is not without a certain influence in the way of inhalation; for a portion of the iodine evaporates, and slightly impregnates the air around the patient, and this atmosphere of iodine may not be without its influence for good." * * * *

"Of far more importance in the treatment of consumption is change of air and climate. It is of the greatest consequence to the phthisical invalid that he should breathe as pure an air as possible, and that the influence of this pure air on the blood and on the body should be increased by such gentle and varied exercise in it as his strength and the condition of his organs will permit. This is the great object of our sending him to a warm climate in winter, and to a high and dry locality in the summer, that he may be as much as possible in the *open air*, with its exhilarating and vivifying accessories of light, purity, and freshness, without the chilling operation of cold and wet in the winter, and the enervating and exhausting influence of oppressive heat in the summer." * *

In conclusion, Dr. W. states "that, powerless as medicine is in the overwhelming and rapid types of pulmonary consumption, it has yet considerable influence over the milder forms; and *that under careful treatment life may be prolonged for many years in comfort and usefulness, and in not very few cases the disease is so permanently arrested that it may be called* CURED."

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13. *Use of Ether and Etherized Cod-liver Oil in the Treatment of Phthisis.*—Dr. B. W. FOSTER, in a paper read before the British Medical Association, at its recent meeting, referred to the great difficulty of digesting fatty food which distinguished the great majority of phthisical patients and stated that this defective assimilating power has hitherto been treated by incorrect or insufficient means. The only true method of treatment, he thinks, to be adopted in

such cases, should be directed to the organs whose secretions are at fault. Physiology teaches that the digestion of fat is specially performed by the secretion of the pancreas and the glands of small intestine. Dr. Foster had long sought for a means of influencing these glands, and at last had found most ample evidence in the works of Claude Bernard, that ether is capable of augmenting the pancreatic secretions to almost any degree. Bernard was accustomed, in his experiments, to give ether to animals, in order to obtain a good flow of pancreatic juice. Applying this discovery to the treatment of phthisis, Dr. Foster had met with most satisfactory results. The ether was given as a mixture sometimes, but generally in the form of etherized cod-liver oil. Of the patients treated, and all observed over some months, some over two years, 42 per cent. improved under treatment, 30 per cent. remained stationary, and only 28 per cent. became worse; 12 per cent. of the cases treated presented all the evidence of the arrest of the disease. In no case were the symptoms and physical signs alone accepted as evidence of improvement, every case was weighed from week to week while under observation, and only a decided increase of weight in addition to other signs received as evidence.—*British Medical Journal*, Aug. 8, 1868.

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14. *Etiology of Phthisis.*—Dr. P. Eade, of Norwich, in a paper read before the British Medical Association, endeavoured to show that tubercle was essentially but an expression of feeble vitality and exhausted nerve-power, permitting the occurrence of an ill-regulated or unrestrained cell-growth or development. Cells (he said), more or less simple, were the original and lowest form in which animal life was presented. Higher animal structures were formed of such cells elaborated under the influence of more highly developed nervous centres. Any defect of these centres would tend to allow the body to be formed of less highly organized and vitalized tissues with a constant tendency to revert to their original form of cells. The subjects of congenital tuberculosis were feebly and flabbily formed, and their tissues had a constant tendency to disintegrate (proneness to ulceration), and to develop new cell-structures (in lymphatic glands and as purulent discharges). The actual invasion of disease in tuberculously cachectic individuals was due to exhaustion of the nerve-force of the part affected. In acquired tuberculosis (which was chiefly of the lungs) a similar exhaustion of the peripheral nervous twigs was produced, either directly or more commonly by a reflex action from the surface. The part was thus at once reduced to a lower condition of life, and cell growth was allowed to begin, either in spots as miliary tubercle, or in parts as tubercular consolidations. The cells were of feeble vitality, and hence tended rapidly to degenerate. They were possibly capable of reproduction. A close affinity existed between the cause of inflammation and tuberculization of the lungs, the difference being that in the one case the effect produced was sudden or extensive and the patient healthy; in the other the effect was produced more slowly and the patient was congenitally cachectic or temporarily lowered in nervous tone.—*British Medical Journal*, Aug. 8, 1868.

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15. *Thermometry of Enteric Fever.*—The number of the *Edinburgh Medical Journal* for August last contains an interesting paper on this subject by Dr. T. J. Maclagan. He states that the chief feature in the thermometry of this disease, as has already been observed, is the tendency which the temperature shows to fall in the morning and rise in the evening. This characteristic is more marked at some stages of the disease than at others; but, in cases tending to a favourable termination, is never altogether wanting, and at the commencement of defervescence becomes so exaggerated as to be quite a distinguishing feature of the disease.

To illustrate this characteristic range as well as its practical utility in diagnosis, prognosis, and treatment, he relates six cases.

The following is a brief summary of the facts he has observed:—

"1. The main feature in the thermometry of a typical case of enteric fever is a marked tendency to a morning fall and evening rise, which during defervescence is so great as to be characteristic of the disease.

"2. The temperature during the continuance of the febrile state, however, does not enable us to distinguish enteric from other forms of fever.

"3. In cases resembling, and apt to be mistaken for, typhus, the evidence given by the thermometer is uncertain and not equal in value to that got from other sources, especially the condition of the eyes.

"4. In cases which throughout have been doubtful, it often gives during defervescence the only certain testimony as to the nature of the malady.

"5. When head-symptoms are severe, and death is threatened by coma, the range of the temperature is generally high and irregular; but the more rapid onset of the head-symptoms in such cases does not permit of the thermometer giving the same premonitory indications which it often gives in typhus.

"6. Irregularities in the range, absence of the morning fall, and still more a morning temperature which exceeds that of the evening, are indications of severity, and specially so when the range is at the same time high.

"7. A fall of the morning temperature at the end of the 2d week, and a subsequent range during the 3d, lower than that which existed during the 2d, are favourable signs.

"8. The highest range occurs in cases which present marked head-symptoms.

"9. Inflammatory affections springing up during the course of the disease have an elevating tendency.

"10. Hemorrhages and diarrhœa have, when profuse, a lowering tendency.

"11. A fall of the morning range is generally the first sign of commencing defervescence.

"12. Elevation of the temperature is one of the earliest indications of a relapse."

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16. *Typhoid Cutaneous Spots.*—**Zulchaur** (*Berliner Klin. Wochenschr.* 1868, No. 12) describes the occurrence, in conjunction with an unusually copious roseolar eruption, of another one of a yellowish-brown colour of the size of a two-dollar piece and over. The latter spots run into one another. They occur very early, soon after the first chill. They were only observed in very severe cases, which in the first, or in the commencement of the second seven days' period, terminate in death.—*Centralblatt f. d. Medicinisc. Wissenschaf.*, 1868, No. 24. D. F. C.

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17. *Pathology and Treatment of Sunstroke.*—Dr. **Geo. Johnson** considers that this affection might be more correctly designated as *heat-apnœa*, and he offers (*Brit. Med. Journ.*, Aug. 1, 1868) the following physiological explanation why the super-heating of the blood which precedes and accompanies this disease has a depressing, and not a stimulating, effect on the nervous centres.

"The hot blood relaxes the muscular walls of the minute pulmonary arteries. The pulmonary capillaries are consequently flooded with blood. This overfulness of the capillaries interferes with the aëration of the blood. In fact, the overgorged vessels must encroach upon the pulmonary vesicles, and so diminish the air-space within the lungs, while the air itself is highly rarefied. Hence a state of more or less complete apnœa. Unaërated blood is sent to the muscular tissue of the heart, and to the brain; hence the cardiac and the cerebral symptoms. A similarly engorged state of the cutaneous capillaries, consequent upon extreme relaxation of the minute arteries, is the probable cause of the dryness of the skin. An excessively engorged state of the capillaries is as unfavourable for cutaneous secretion as it is for pulmonary respiration. The dry and inactive state of the skin and the want of surface-evaporation tend to elevate still more the temperature of the blood; and the suppressed cutaneous secretion, being diverted to the kidneys, probably alters the quality of the urine, renders it irritating to the bladder, and explains the frequent micturition.

"This explanation of the phenomena is confirmed by the results of treatment. There is now a very general concurrence of opinion that the application of cold to the skin is the most successful remedy. The object to be kept in view is not merely, as it is generally stated, to cool the skin, or to excite the respiratory movements by the stimulus of the douche, but to cool the blood, and thus to restore the contractility of the minute arteries of the lungs. The condition of the pulmonary vessels in this disease is the exact opposite to their state in cholera collapse. In cholera collapse, the minute pulmonary arteries are in a state of extreme contraction; and, as a consequence, the capillaries are extremely anæmic. In heat-apnœa, the pulmonary arteries are extremely relaxed; and the capillaries, consequently, are excessively engorged. In cholera collapse, external warmth in some degree, but much more rapidly and decidedly a warm injection into the veins, relaxes the arterial spasm, and restores the circulation. In heat-apnœa, on the contrary, the object is to cool down the overheated blood, so to revive the contractile power of the minute pulmonary arteries, to relieve the capillaries from their embarrassing excess of blood, and thus to remove the state of apnœa. A clear apprehension of these physiological principles cannot fail to be of great assistance in practice.

"In the treatment of heat-apnœa, the following appear to be the main points which require attention. The patient should be placed in a recumbent position in the coolest possible place, with a free current of air. The clothes should be removed, and cold water applied to the whole surface; or, if the symptoms be urgent, the clothes should immediately be saturated with cold water, without waiting to remove them. If the respiratory movements be failing and feeble, the cold douche is a powerful excitor; but if the breathing be rapid and laborious, it is better to envelop the body in a wet sheet, and to quicken evaporation and cooling by a fan or a pair of bellows. If the patient can swallow, let him drink iced water freely. Whether he can swallow or not, iced water may from time to time be injected. The marvellous effect of hot venous injections in cholera collapse, and the urgent need for cooling the blood in heat-apnœa, suggest the expediency, in extreme cases, of injecting into a vein the same saline solution as has so frequently been employed in cholera, only injecting it cold instead of hot.

"Dr. Morehead (*Clinical Researches on Diseases in India*) recommends venesection in the early stages of the attack, while Dr. Maclean condemns the practice. A routine practice of venesection would be destructive; but, when symptoms of excessive venous engorgement are present, a cautious venesection would be quite justifiable, and probably beneficial, on the well-known principle of lessening distension of the right side of the heart, and thus increasing its contractile power. When respiration has suddenly and quite recently ceased, artificial respiration by Dr. Silvester's method may possibly restore animation. While symptoms of apnœa continue, however great may be the apparent exhaustion, no alcoholic stimulants are to be given, for the reason that alcohol, as well as anæsthetic vapours and narcotics, impede oxidation of the nervous and other tissues, and therefore increase the risk of death from apnœa. Ammonia may be applied to the nostrils as a stimulant, and, if the patient can swallow, it may be given internally. Ammonia is a powerful diaphoretic, and the restoration of the cutaneous secretion is an important step towards recovery. When the skin becomes cool and moist, of course all cold applications are to be discontinued. To sum up, then—as *hot air* and *hot blood* are the cause of this form of apnœa, so *cold air* and *cold water* are the chief means of cure; all other means are subsidiary to these."

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18. *A Cure for Headache.*—Dr. Geo. Kennion extols (*Brit. Med. Journ.*, June 13, 1868) the efficacy of the bisulphide of carbon in solution as a prompt cure for certain forms of headache.

The application is made as follows: "A small quantity of the solution (about two drachms) is poured upon cotton-wool, with which a small, wide-mouthed, glass-stoppered bottle is half filled. This, of course, absorbs the fluid; and when the remedy has to be used, the mouth of the bottle is to be applied closely (so that none of the volatile vapour may escape) to the temple, or behind the ear, or as near as possible to the seat of pain; and so held for from three to five or six minutes. After it has been applied for a minute or two, a sensation is felt as if several leeches were biting the part; and, after the lapse of two, three, or four minutes more, the smarting and pain become rather severe, but subside almost immediately after the removal of the bottle. It is very seldom that any redness of the skin is produced. The effect of the application is generally immediate. It may be reapplied, if necessary, three or four times in the day.

"The class of headaches in which this remedy is chiefly useful is that which may be grouped under the wide term of 'nervous.' Thus neuralgic headache, periodic headache, hysterical headache, and even many kinds of dyspeptic headache, are almost invariably relieved by it; and, although the relief of a symptom is a very different affair, of course, from the removal of its cause, yet no one who has witnessed (and who of us has not seen?) the agony and distress occasioned by severe and repeated headache, but must rejoice in having the power of affording relief in so prompt and simple a manner."

19. *On the Pathology and Therapeutics of Disorders of the Nervous System, accompanied with Excess of Motility.*—Dr. STRANGE, of Worcester, classes under this title chorea, hysteria, epilepsy, paralysis-agitans, mimosa, and some forms of insanity. His object was to show, by a minute examination of the special symptoms of each, as well as from the general symptoms common to the whole group, that there was a family relationship between them all, and that their pathology must be looked for in the difference in the parts of the nervous system, rather than in any essential distinction between the morbid processes in each. Excess of motility showing a diminution rather than an excess of the nervous force, the treatment in all these disorders will be substantially the same; namely, by such means as should, 1st, improve the quality of the blood; and 2d, by presenting material easily assimilable by the nervous tissue. He had found the most rapid cures from the administration of alcohol, as food to the vesicular neurine, in frequent small doses (six to eighteen ounces daily), in chorea, hysteria, mimosa, etc., in conjunction, in some cases, with cod-liver oil, and from large doses of bromide of potassium in epilepsy.—*Proceedings of British Medical Association*, in *Brit. Med. Journ.*, Aug. 8, 1868.

20. *On some Forms of Visceral Neuralgia.*—Dr. ANSTIE, in a paper read before the Brit. Med. Assoc., discussed the subject of, 1, of neuralgia of the heart; 2, of the ovary and uterus.

1. Under the heading of cardiac neuralgia the author included every variety of the affection commonly known as angina pectoris. He endeavoured to show that, whatever the amount of organic change present in the heart or vessels, the essential feature of the disease, and that which constitutes its interest and its danger to life, is the element of neuralgic pain; or rather, that condition of the nervous system of which that pain is the prominent expression. So far is angina from being always, or nearly always, a rapidly fatal disease, that the author is convinced, from his own experience and from the study of recorded cases, that in the great majority of instances, this affection runs a decidedly chronic course, with intermissions, which completely characterize the neurotic origin of the disorder. In support of this position three series of facts were adduced. The first series included the narration of striking cases in which the anginal spasms recurred during fifteen or twenty years, and death at last took place, not from heart-spasm or heart-palsy, but from degenerative disease of the nervous centres. The second series of facts was concerned with the evidently close relations between angina and the ordinary neuralgias (as shown by the frequent occurrence of the latter in anginal patients), and with the intimate connection evidently existing between spasmodic asthma and angina pectoris. The third series of considerations included the arguments from hereditary taint, and these are, perhaps, the strongest of all. Not only is an angina itself frequently a direct inheritance (as in the celebrated case of Dr. Arnold, whose father had died exactly as he did), but the most ordinary care in inquiring about pain by history will not fail to produce a striking effect on the physician's mind by showing the extraordinary frequency—one might almost say universality—with which anginal patients will be found to have descended from a race strongly marked by tendencies to the more severe neuroses. These positions were illustrated by cases which had come under the author's notice; and the following general conclusions were drawn: 1st. That the essence of angina is a neuralgic condition which (by reflex action on the cardiac motor nerves) may produce either cardiac palsy or cardiac spasm. 2d. That the tendency to this neurotic condition is constitutional, and nearly always congenital. 3d. That the various organic lesions which have from time to time been found in anginal patients acted merely as greater or lesser *provocatives* to the neurotic disorder. The author then discussed in detail the treatment of cardiac neuralgia.

2. As regards uterine and ovarian neuralgia, the author remarked, at the outset, that those affections are distinguished from other neuralgias by the frequency with which *peripheral* sources of irritation are the most important factors of the neuralgic state. Considering the great copiousness of the nervous supply to the uterus and ovaries, and the powerfully disturbing character of the functional processes which are periodically recurring in these organs, we need be at no loss to understand how this should be. The most common variety of peri-uterine neuralgia is that which attends certain kinds of difficult menstruation. It would not be correct, however, to give the name of neuralgia to the pain suffered in many cases of dysmenorrhœa, in which the suffering is apparently entirely dependent on and commensurate with the amount of obstruction to the escape of menstrual fluid, although its character somewhat resembles the neuralgic type. There is, however, a true neuralgic dysmenorrhœa, the subjects of which have exaggerated sensitiveness of the pelvic organs, and are, besides this, liable to neuralgia of other parts. In the virgin condition they suffer at every period from frightful pain, and this pain is not relieved, or is only most imperfectly relieved, on the occurrence of the flux. These young women, so far from having any mechanical conformation which forebodes sterility, are usually both perfectly apt for conception and child-bearing, and are also evidently benefited by the exercise of these functions. As a contrast to a case which he had related, of dysmenorrhœa from mechanical obstruction, in which marriage was sterile, and the painful periods continued after it, the author related two cases in which frightful neuralgic attacks which had accompanied menstruation in the virgin state diminished after marriage, and soon entirely ceased. This favourable alteration was coincident with an improvement in the general health, and a lessening of the general tendency to neuralgic and other nervous disturbances. The peripheral sources of irritation which give rise to uterine or ovarian neuralgia are not always situated in those organs themselves. Ascarides in the rectum, leucorrhœa of a purely functional nature and proceeding simply from the vagina, calculus of the kidney or ureter, scybalous feces in the rectum, and even the irritation of parts far more distant, may produce pelvic neuralgia in a reflex manner. Even a carious tooth has been known to produce this effect, and its removal to effect an immediate cure. There is, however, one kind of peripheral irritation locally connected with the uterus itself, which is probably one of the most frequent of all exciting causes of uterine and ovarian neuralgia—namely, displacements and flexions of the womb. It has been recently stated by Dr. Graily Hewitt—and the opinion of that high authority was fully confirmed by his (Dr. Anstie's) own much smaller experience—that the great majority, if not all, of the cases which Gooch grouped under the title of "irritable uterus" are really examples of uterine displacement or flexion. The kind of pain which attends these cases, although more or less continuous, is liable to periodical aggravation which assume all the severity of true neuralgia, and this severity is largely commensurate with the sensitiveness of the general nervous system. The author made full reference to the treatment, especially by subcutaneous injection of sedatives.—*Lancet*, Aug. 15, 1868.

21. *Ergot of Rye in the Treatment of Neuralgia.*—The object of this paper, read before the British Medical Association, by Dr. E. Woakes, being to introduce the ergot of rye as a remedy in the treatment of neuralgia, a brief epitome of the writer's views of the pathology of this disease preceded the illustrative cases, this application of the drug being the direct corollary of his theory. Regarding shingles as more or less illustrative of all forms of neuralgia, the author referred the rash, and the pain in it, to the same cause; viz., effusion of liq. sanguinis from the ultimate branches of the artery in the track of which the symptoms appear. Tracing this artery to the skin in one direction, the effusion from a papillary arterial twig was seen to occasion a spot of herpes upon the cuticular surface of the papilla; tracing it in the direction of the corresponding sentient nerve, the fluid effused from the nutrient twigs (vasa nervosum) supplying it was found to occasion, by its mechanical disturbance of the sentient fibrillæ, the severe pain constituting the associated neuralgia. The cause of the effusion in such case was referred to a temporary suspension of the regulating

influence exercised over the minute arteries by the sympathetic nerve-fibres distributed to them. It was this suspended function that the ergot was supposed to restore, and so to allow of the removal of the fluid from its pain-causing situation. Five cases were reported; one of severe neuralgia following shingles, one of sciatica of four months' duration, one of hemicrania, and two of ordinary tic; in all of which cure resulted in from four to six days after commencing with the ergot.—*British Medical Journal*, Aug. 8, 1868.

22. *Zymotic Theory of Disease.*—Dr. FARR, in his recent official report on the cholera epidemic of 1866, sums up his conclusions in regard to the zymotic theory in the following words:—

"It is now held by naturalists that each organ of the body has its proper life; and that it consists of minute centres of action, which have been called cells, globules, organic units, germs, granules, and other names. The cells, like the supposed vesicles of the clouds, are now shown to be solids, and Beale proposes to call them 'germinal matter,' which is perhaps a description rather than a name. 'Monad' would serve to designate these living particles, but as it, as well as the other names proposed, have been already appropriated, these units of force and life may be designated *biads*. Nearly alike under the microscope, *biads* differ infinitely in power and variety; for instance, the brain-cells of man in an early stage of development resemble the pus globules of ordinary inflammation. 'Masses which could not be distinguished from one another [even by Dr. Beale], manifest the most remarkable differences in power.' . . . 'By chemical analysis every kind of germinal matter (*biads*) yields one substance resembling fibrin, another allied to albumen, fatty matter, salts, and water.' Of these *biads* all bodies are built up.

"It is only with particular kinds of these *biads*, then, that we have to do in *zymosis;* and to give definite form to the theory, while *vaccine* lymph may be briefly called *vaccinine*, the granules of Chaveau may be named *vaccinads;* while those of *varioline* (smallpox lymph) are named *variolads;* those of *syphiline*, *syphilads*, and those of *cholerine*, *cholerads*, the choleragenic molecules of Pacini.

"It is life in this low form, where it is developed in isolated particles at war with those which constitute men, that generate zymotic diseases. An epidemic is the war of a conquering host of innumerable particles of life. It is therefore subject to the laws of growth and decay, both in the individual man and in communities."—*Medical Times and Gazette*, August 15, 1868.

23. *The Solubility of False Diphtheritic Membranes.*—The *Journal de Chimie et de Pharmacie* for May contains a short review of the work of MM. BRICHETEAU and ADRIAN on this subject. One of the experiments is of interest: "A false tracheal membrane, weighing about twenty centigrammes, thick, resistant, and representing a square centimetre of surface, was placed in a tub containing about five grammes of water. To this was added two drops of lactic acid; the solution was then agitated. In two minutes the membrane began to disintegrate, and gave signs of dissolving. A few drops more of the acid brought about the complete solution of the membrane. A more complete result was obtained by using lime-water, so as to form lactate of lime. Solutions of potash and soda acted much less powerfully. Bromine water, chlorate of potassa, and common salt were all found less active in promoting solution of the membrane." The authors, therefore, recommend the solution of lactic acid as the best topical application to the false membranes of diphtheria.—*The Practitioner*, July, 1868.

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24. *On the Employment of Physostigma (Calabar Bean) in the Treatment of Tetanus and Chorea.*—Dr. THOMAS R. FRASER says (*The Practitioner*, August, 1868) that "tetanus appears to be, essentially, a disease characterized by an